metal or porous tantalum portion press fit into helical threads may be used anywhere on an animal or human body.

It will also be appreciated that instead of, or in addition to, porous tantalum or porous metal, a shaft may be made of a first material that promotes bone growth or strengthens the implant instead of porous tantalum such as organic bone graft (e.g., autograft, allograft, xenograft), resorbable polymer (e.g., polylactic co-glycolic acid (PLGA), polylactic acid (PLA), polyglycolic acid (PGA), polyhydroxybutyrate (PHB), and polyhydroxyvalerate (PHV)), non-resorbable polymer, synthetic bone material such as hydroxyapatite (HA), or collagen. A shaft of such material may be initially formed and then press-fit into a thread of a different material, as described above, or the thread may be formed on the shaft in other ways.

While this invention has been described as having a preferred design, the present invention can be further modified within the spirit and scope of this disclosure. This application is therefore intended to cover any variations, uses, or adaptations of the invention using its general principles. Further, this application is intended to cover such departures from the present disclosure as come within known or customary practice in the art to which this invention pertains and which fall within the limits of the appended claims.

What is claimed is:

1. An implant, comprising:

a shaft having an apical end, a coronal end and an exterior surface, the entire exterior surface of the shaft being formed of a first material that is substantially porous;

a head portion having a main body with an apical end and a coronal end; and

a coil of threads having an apical end, a coronal end and an interior surface, and being made of a second material that is different from the first material, wherein the coronal end of the coil of threads is connected to the apical end of the main body and the coil of threads extends apically from the main body, with the interior surface of the coil engaging and winding around the exterior surface of the shaft, and extending outwardly from the exterior surface for engaging bone, with the interior surface of the coil of threads disposing the coronal end of the shaft proximate the apical end of the main body.

2. The implant of claim **1**, wherein the second material from which the coil of threads is made is substantially non-porous.

3. The implant of claim **1**, wherein the first material includes tantalum.

4. The implant of claim **1**, wherein the first material comprises at least one of an organic bone graft, a resorbable polymer, a non-resorbable polymer, synthetic bone material, and collagen.

5. The implant of claim **1**, wherein the head portion comprises at least one of titanium, titanium alloy, stainless steel, zirconium, cobalt-chromium molybdenum alloy, ceramic, a polymer, and a composite material.

6. The implant of claim **1**, wherein the shaft has a coronal bore and the main body has an apical extension, and wherein the apical extension is disposed within the coronal bore when the shaft is disposed within the coil of threads.

7. The implant of claim **6**, wherein the apical extension of the main body is pressed fit into the coronal bore of the shaft.

8. The implant of claim **1**, wherein the coronal end of the coil of threads is integrally formed with the apical end of the main body of the head portion.

9. The implant of claim **1**, wherein the coil of threads maintains the shaft in engagement with the main body of the head portion.

10. The implant of claim **1**, wherein the coil of threads and the head portion are made from the same material.

11. The implant of claim **1**, wherein the coil of threads is helical and defines a central opening configured for receiving the coronal end of the shaft.

12. The implant of claim **1**, wherein the coil of threads is configured to engage the exterior surface of the shaft by at least a press-fit.

13. The implant of claim **1**, wherein the coil of threads is secured to the shaft with sufficient friction to restrict axial motion of the shaft relative to the coil of threads.

14. The implant of claim **1**, wherein the exterior surface of the shaft defines a helical groove for receiving the coil of threads.

15. The implant of claim **1**, wherein the implant is a dental implant.

16. The implant of claim **1**, wherein the coil of threads comprises three coils of threads each having an apical end, a coronal end connected to the apical end of the main body, and an interior surface, wherein each of the coils of threads extends apically from the main body with the interior surfaces of the coils engaging and winding around the exterior surface of the shaft.

17. A dental implant, comprising:

a shaft having an apical end, a coronal end and an exterior surface, the entire exterior surface of the shaft being formed of a metallic and substantially porous material;

a head portion having a main body with an apical end and a coronal end; and

a helical thread having an apical end and a coronal end, wherein the coronal end of the helical thread is connected to the apical end of the main body and the helical thread extends apically from the main body, and with the helical thread generally defining a central opening receiving the shaft and securing the shaft in at least a press-fit within the helical thread, with the helical thread disposing the coronal end of the shaft proximate the apical end of the main body.

18. The dental implant of claim **17**, wherein the shaft is porous and the thread is non-porous.

19. The dental implant of claim **17**, wherein the head portion comprises a non-porous head portion.

20. The dental implant of claim **19**, wherein the main body of the head portion includes an apical extension press fit into a coronal bore of the shaft.

21. The dental implant of claim **17**, wherein the helical thread maintains the shaft in engagement with the head portion.

22. The dental implant of claim **17**, wherein the helical thread is integrally formed with the head portion.

23. The dental implant of claim **17**, wherein the helical thread has a spiraling interior surface generally defining the central opening for facing and engaging the shaft.

24. A method of assembling an implant comprising:

providing a head portion having a main body with an apical end and a coronal end, and a helical thread having an apical end and a coronal end, wherein the coronal end of the helical thread is connect to the apical end of the main body and the helical thread extends apically from the main body, with the helical thread defining a central opening;

providing a shaft having an apical end, a coronal end and an exterior surface, with the entire exterior surface being formed of a metallic and substantially porous material; and

inserting the porous shaft into the central opening formed by the helical thread, with the helical thread engaging